

SRICT

TECHNOCRAT



Exploring, learning, and growing together—one day, one lesson, and one success at a time!



Chemical Technology

2025

Issue #02

UPL UNIVERSITY

Pharmaceutical Tech.

Pharmaceutical technology is the application of scientific and engineering principles to convert an active pharmaceutical ingredient (API) into a safe, effective, stable, and patient-acceptable dosage form.

Polymer & Rubber Tech.

A field studying long-chain molecules (polymers) to create useful materials focusing on their synthesis, processing characterization, and application in industries

Dyes & Pigment Tech.

Focus on synthesizing, processing, and applying colorants for various industries

Glass & Ceramic Tech.

A field studying, developing, and producing materials combining glass (amorphous) and ceramic (crystalline) properties, creating materials like glass-ceramics



Chemical Technology is a field that involves the application of Chemical Engineering principles and unit operations to develop processes for producing and transforming chemical products, while addressing challenges such as sustainable development and resource management.



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Message from Provost



The Department of Chemical Technology at UPL University of Sustainable Technology is dedicated to laying a strong and sound foundation in pertinent chemistry and fundamentals of chemical engineering, which is essential for developing competent professionals capable of addressing modern technological challenges.

In addition to core training in basic chemical sciences and chemical engineering, the branch of Chemical Technology encompasses a wide range of specialized disciplines, including Pharmaceutical Technology, Polymer and Rubber Technology, Dyes and Pigments Technology, and Glass and Ceramics Technology. This multidisciplinary framework provides students with comprehensive knowledge and practical skills relevant to diverse industrial sectors.

The department places strong emphasis on academic excellence, hands-on learning, research orientation, and sustainable technological practices. By integrating theoretical understanding with practical exposure and innovation, the Department of Chemical Technology plays a significant role in advancing the university's vision of sustainable development and industry-ready education.

I appreciate the continuous efforts of the faculty and students in achieving academic distinction and contributing positively to society. I extend my best wishes for the continued success and growth of the Department of Chemical Technology.

Message from HOD

I am delighted to publish the second e-newsletter of 2025, "TECHNOCRATS," for the Department of Chemical Technology.

Our department's vision is "To produce 'Chemical Technologists' who are globally competitive, socially and ethically conscious, and equipped with the skill-sets to meet the demands of society and work in frontier areas of Chemical Technology."

The purpose of this newsletter is to share scientific and technical articles, highlight departmental achievements, technical and non-technical events, and more. I extend my gratitude to my colleagues and students for their constant support in advancing the department and contributing to the university's sustainable development.

Dr. Nilesh Prakash Badgujar,
Professor & Head of Department



Editorial Board Members



**Dr. Nilesh Badgujar – Professor & HOD of
Chemical Technology**

**Mr. Apurba Chakrabarthy
Assistant Professor
Glass&Ceramic Technology**



**Mrs. Gayathri Banda
Assistant Professor
Pharmaceutical Technology**

**Kisan Pandey
Student member**



**Karthik Pandey
Student member**





Vision

To strive to produce 'Chemical Technologists' who would be globally competitive, socially and ethically conscious, and having skill-sets to successfully meet demands of society and work in frontier areas of Chemical Technology.

Mission

- To emphasize through appropriate course content the fundamentals of applied chemistry for Chemical Technological applications.
- To impart practical aspects of the profession by way of prevalent industrial practices by designing relevant experiments in state-of-the-art laboratories.
- To produce competent man power with deep awareness of ethics and environment for sustainable development of Chemical profession.
- To orient students to entrepreneurial skill-sets to ultimately lead to self-sufficiency for the nation.

Departmental Activities

One Week Training Program was conducted at department level from 21/04/2025 to 25/04/2025

Title of training: Process Engineering: Design, Development and Safety In Practice

Total Sessions conducted: 05

Total Participants: 45

Notable Speakers:

1. Mr. GovindPatil, Department Manager / Team Lead & Senior Research Scientist/ FLACS 3D CFD- Expert & Trainer, GexconIndia Pvt. Ltd & Gexcon Middle East
2. Mr. Nilesh Joshi, Founder Proprietor, VED Enterprises, Ratnagiri
3. Mr. Ankur Shah, Cluster Head Process Safety, UPL Ltd
4. Prof. ShirishSonawane, Professor, Department of Chemical Engineering, NIT Warangal
5. Mr. RishikeshChormare, Senior Scientist & Safety Officer, CSMCRI, Bhavnaga

REVA-2025

On April 04th, UPL University of Sustainable Technology celebrated its annual day "REVA-2025" with at the University campus. All the students along with their guardians were invited. The function was graced with the august presence of Chief Guest Shri K. Kumaravel, President & Unit Head, Birla Copper Dahej, Guest of Honour Shri Sunil Chari, MD Rossari Biotech Ltd., Shri Tushar Shah (DG-3060), Chairperson Emeritus, Mrs Sandra Shroff President Mr.Ashok Panjwani, Mrs Meera Panjwani, Treasurer ARES Mr Kishore Surti, CEO BEIL Mr.Bhupendra Dalwadi, Mr.Mahesh Mistry, Mr.Arun Ashar and Mr Sunil Neve and other guests from Rotary and industries.



"Chemical Sparks" Quiz for future Engineers & Technologists



The Department of Chemical Technology has organized a Technical Quiz competition entitled "Chemical Sparks- Quiz for Future Engineers & Technologists" in Seminar Hall-3 on 21/08/2025 from 9:30 AM onwards.

Students across all the departments are hereby informed to join this competition in order to hone their skills of aptitude and quiz based on technical and engineering topics of significance. Students are encouraged to join in large numbers.



Sci-Technovation 2025



**Students of
Chemical
Technology
participated in
following 3 events**

- 1. Chemical Formula
Fusion**
- 2. Scivation League**
- 3. Blind Volleyball**

**Date: 18th - 19th
Sept. 2025
Total Nos.: 25
Students**



Triumph in 13th Annual Convention in Quality Concepts ACCQC 2025



**Kunal Badgujar
Priti Badgujar of
Team ELEGANCE are
awarded with
prestigious Gold
Medal
on
13th September
2025**



Navratri Celebration at UUST



|| Jai Mata Di ||
UUST Family
cordially invites you
to seek Mata Rani's blessings on the
auspicious occasion of



Aadishakti'25

❁ "या देवी सर्वभूतेषु शक्तिरूपेण संस्थिता।
नमस्तस्यै नमस्तस्यै नमस्तस्यै नमो नमः॥" ❁

Time: 09:00 Am

Date: Friday, 26/09/2025

Venue: University Parking Ground

Coordinated by:

SRICT-Institute of Science and Research, and Dept. of Chemical Technology



Promotional activity during Navratri celebration in Rotary Garba ground on 26th September 2025



Department of Chemical technology promoted scope and opportunities of admission to various courses in UPL University to the visitors on at Rotary Garba ground during Navratri celebration

Industry – Institute Interaction

One MoU has been signed between UPL University of Sustainable Technology and ICT, Mumbai on 22nd April 2025. MoU was signed by Prof. Shrikant J. Wagh, Provost, UPL University and Prof. A.B. Pandit, Vice Chancellor, ICT Mumbai. The MoU will come up with a flurry of opportunities for exposure through Collaborative Research work, Expert lecture, Industrial visit, Internship and other professional assignments.



MoU with ICT Mumbai



List of MoU's with CT

Sr. No.	Name of the collaboration centre	Start date	End date	Activity Done
1	Zentiva Pvt. Ltd.	12.01.2022	12.01.2026	Invited Speaker in IPT2024 conference dated 27th Dec. 2024
2	Ami polymers	17.08.2023	16.08.2026	Industrial Visit was conducted dated 22nd April 2025
3	Rubber Skill Development Council	20.09.2022	20.09.2026	Involved as a BOS Member
4	Apex Pharma Pvt. Ltd.	01.01.2022	01.01.2026	Telephonic Conversation with Mr. Dilip Khut for IV & EL
5	Shree Colospere Pvt Limited, Ankleshwar	17.02.2021	17.02.2026	Industrial Visit was conducted dated 22nd April 2025. Also Involved in the preparation of PGD –Colourant Tech.
6	Hindustan Bakelite Company	10.08.2023	09.08.2026	Sent Students for admission in UUST.
7	Riddhi Pharma	18.03.2023	18.03.2026	Approach for participation in refresher course.
8	PGP Glass Pvt. Ltd., Kosamba	20.09.2023	20.09.2026	Expert lecture conducted in 31st Jan. 2025 & 04 nos. of D2D admission done in GC
9	Lupin Ltd.	09.12.2021	09.12.2024	Rs. 0.5 Lac. sponsorship was given in Refresher course
10	Institute of Chemical Technology, Mumbai	22.04.2025	22.04.2028	2 nos. of Professor were invited for speakers in refresher course.
11	Asha Enterprise	27.09.2022	27.09.2026	Faculty took internship for 01 week.
12	Shree Polymers	09.09.2022	09.09.2026	Planning of Industrial Visit.
13	Paras Pharma Chem, Ankleshwar	06.12.2023	06.12.2026	Participated in Training Program & also participated in MoU orientation with Rtn. Parag Sheth.
14	Pharma Consultants Group Companies, Vadodara	08.11.2024	08.11.2027	Invited as a speaker in Refresher course(IPT-2024).

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Expert Lecture (EL) Delivered

Sr. No.	Branch	Date / Month	Name of Expert	Industry/ Institute	Topics Delivered
1	CT Sem-8,6,4	25/02/2025	Ms. Baljeet Shah	Deputy General Manager, Sun Pharmaceutical Industries Ltd.	Interviewing Skills & Interpersonal Relationship
2	CT Sem-8,6,4	11/3/2025	Chetan Joshi	GM, Adama Industries	Six sigma, Total productivity maintenance
3	CT Sem-8,6,4	13/3/2025	Ketan Gandhi	AGM, Lab Safety, UPL	Good Laboratory practices
4	Sem-4 &6	17/3/2025	Pinkesh Prajapati	Senior officer, Cheminova	Basic Lab safety
5	CT Sem-8,6,4	9/4/2025	Gavandhare Sahaji	Deputy Manager, Heranba industries Ltd., Vapi	Innovative ways of waste water treatment
6	Sem-5, 3	7/1/2025	Dr. Mukesh Bhatt, Project Scientist	JB Joshi Research Foundation, Mumbai	Waste to Wealth- Converting municipal waste into fuels, chemicals & Carbon materials
7	Sem-5, 3	7/15/2025	Mr. Tushar chouhan, HR-Head	UPL-13 Dahej	Interviewing skills & Interpersonal Relationship
8	Sem-5,3,1	7/25/2025	Mr. Mahesh Raghawani, Assistant General Manager	Gerreshiemer- Neutral glass, Kosamba	Glass, raw materials & Glass making in glass tank furnase



Glimpse of Expert Lecture Delivered





Department of Chemical Technology organised an Interactive Expert lecture session by one of our proud alumnus student Mr. Ravindra Joshi who is presently working as Process engineer in Process Insights GmbH Germany.

He completed his Master of Science degree in Process and Safety Engineering at Otto Vo Guricke University Magdeburg, Germany. He elucidated on several topics of importance including necessity to develop and adopt an innovative mindset for professional excellence in order to keep abreast with the latest cutting-edge and fast-evolving technological changes.

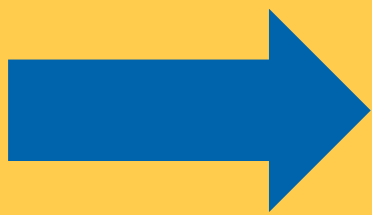




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**Glimpse of
Expert
Lecture
Delivered**



**Glimpse of
Expert
Lecture
Delivered**



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Industry Visits (IV)

Sr. No.	Name of Company	Date of Visit	Branch	Sem.
1	Glenmark Life Sciences	3/3/2025	CT	48
2	Shree Colosperse	22/04/2025	CT	468
3	Ami Polymer	22/04/2025	CT	468
4	Narmada Clean Tech, Ankleshwar	12/8/2025	CT	135
5	Apex Pharma Chem	23/09/25	CT	1,357
6	Sudarshan Gujarat MFG Pvt. Ltd			
7	Narmada Clean Tech, Ankleshwar	12/8/2025	CT	135



Glimpse of Industry Visit



Peer Learning Initiatives (PLI) winter-2025

Sr. No.	Subject Code	Subject Name	Topic Name	Semester
1	MH2202	Mathematics-III	Inverse Laplace Transform	3
2	CT2203	Organic Chemistry-1	Markovnikov Rule and Aldol Condensation	
3	CT2203	Organic Chemistry-1	Synthesis & Application of DDT, Saccharine and Chloramine T	
4	CT2204	Introduction to Medicinal Chemistry, Biochemistry & Human Physiology	Introduction and Importance of Good Manufacturing Practices	
5	CT2201	Basics of Fluid Flow	Pump	
6	MH2201	Communication Skills for English	Kinesics	
7	CT2205	Introduction to Colorants	Introduction to Dyes	

Peer Learning Initiatives (PLI) winter-2025

Sr. No.	Subject Code	Subject Name	Topic Name	Semester
1	CT2302	Basics of Mass Transfer	Single and Multistage Extraction	5
2	CT2302	Basics of Mass Transfer	Absorption	
3	CT2312	Organic Chemistry-2	MPV reduction and Leuckart reaction	
4	CT2312	Organic Chemistry-2	Optical Activity of Lactic acid & Tartaric Acid	
5	CT2309	Functional Dyes & Printing Technology	Digital Printing	
6	CT2309	Functional Dyes & Printing Technology	Hair Dyes	
7	CT2302	Basics of Mass Transfer	Selection of Extraction Solvent	
8	CT2303	Chemical Process Industries	Polymerization Technology	
9	CT2301	Plant Economics & management	Selection of plant location & equipments	
10	CT2301	Plant Economics & management	Process utilities	

Interactive motivation sessions by Alumni students on 15th September- [Engineers' day 2025

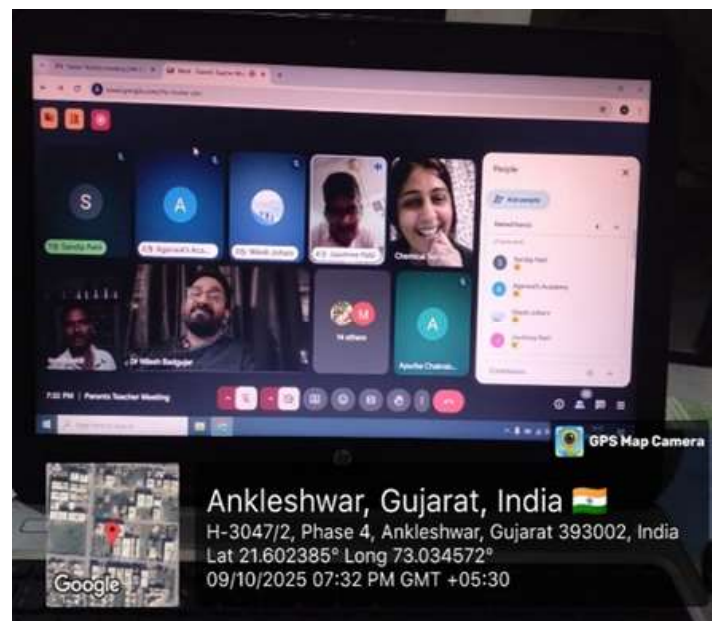


Parents Teacher Meeting

Dr. Jigisha Modi, delivered a comprehensive presentation to all semester parents on 09/10/2025 via the Google meet platform. Dr. Nilesh Badgujar, HOD emphasized the importance of such meetings. He explained that they provide a valuable opportunity for the mutual exchange of ideas on enhancing student performance.

No. of parents present: 25

Parents Feedback: They expressed their satisfaction with the students' performance and progress, acknowledging the dedicated involvement and contributions of the faculty members.





**Technical
Article By
Karthik**

ROLE OF SCIENCE IN HUMAN LIFE

Science plays a very important role in human life. It has completely changed the way we live and work. From morning to night, we use science in some form or the other. It has made human life easier, faster, and more comfortable. Science has brought great improvement in the field of healthcare. Many dangerous diseases can now be cured with the help of medicines, vaccines, and modern machines. Hospitals use advanced technology for diagnosis and treatment, which has increased the average life span of human beings. In communication and transportation, science has done wonders. Mobile phones, the internet, and satellites help people connect with each other instantly, even across long distances. Trains, cars, buses, and airplanes have reduced travel time and made journeys more convenient. Science has also improved education and agriculture. Computers, smart classes, and online education have made learning easier and more effective. In agriculture, scientific tools, fertilizers, and modern techniques help farmers produce more food for the growing population. However, misuse of science can be harmful. Pollution, environmental damage, and weapons are negative effects of science. Therefore, science should be used wisely for the welfare of mankind. In conclusion, science is a great blessing to human life. If used properly, it can make the world a better, safer, and more developed place.



Surprising Chemistry Facts in Everyday Life



1. Around 200 gm salt present in human body which helps to retain water.
2. Blood is not always red some animals have BLUE BLOOD which is due to the Copper containing protein.
3. Mixing sufficient quantity of salt into a full glass of water, the water level will go down as salt have a capacity to retain water
4. Mixing of equal volume of alcohol and water, the total volume will be decreased as the molecules of ethanol are smaller than water molecules, hence on mixing together, ethanol acquire the spaces left between the water molecules causing a less volume of the solution.
5. Air behaves as liquid at temperature of 190 degrees centigrade.
6. Fish scales are commonly used as an integral part of lipstick ingredients.
7. Lightning strikes produce O_3 , which is ozone, and strengthen the ozone layer of the atmosphere.
8. The human body contains enough carbon to provide "lead" (which is really graphite) for 9,000 pencils.
9. One bucket full of water contains more atoms than there are buckets of water in the Atlantic ocean.
10. Bee stings are acidic, while wasp stings are alkaline.